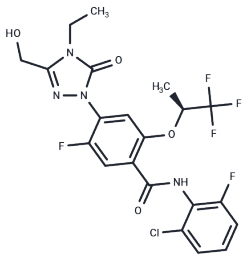
Data Sheet (Cat.No.T14501)

TargetMol

BAY-2402234

Chemical Properties



CAS No. : 2225819-06-5

Formula: C21H18ClF5N4O4

Molecular Weight: 520.84

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	BAY-2402234 is an inhibitor of dihydroorotate dehydrogenase (DHODH) for the treatment of myeloid malignancies.BAY 2402234 is a selective low-nanomolar inhibitor of human DHODH enzymatic activity.
Targets(IC50)	Dehydrogenase,DNA/RNA Synthesis
In vitro	BAY-2402234 induces differentiation of AML cell lines also in a sub-nanomolar to low-nanomolar range which demonstrates the anticipated mode of action in cellular mechanistic assays[1]. BAY-2402234 is a selective low-nanomolar inhibitor of human DHODH enzymatic activity. It potently inhibits proliferation of AML cell lines in the sub-nanomolar to low-nanomolar range in vitro.
In vivo	BAY-2402234 demonstrates potent in vivo anti-tumor effectiveness as a single agent across various AML (acute myeloid leukemia) xenograft models, including subcutaneous, disseminated, and patient-derived (PDX) forms. It promotes AML cell differentiation, evident through increased differentiation cell surface markers in treated xenograft and PDX models. The engagement of this novel DHODH (dihydroorotate dehydrogenase) inhibitor is confirmed by elevated dihydroorotate levels in tumor tissues and plasma post-treatment. Additionally, transcriptomic analyses reveal differentiation-related changes after a single dose of BAY-2402234, underscoring its mechanistic impact on AML cells[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (288 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (19.2 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (19.2 mM),Solution. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.920 mL	9.5999 mL	19.1998 mL
5 mM	0.384 mL	1.920 mL	3.840 mL
10 mM	0.192 mL	0.960 mL	1.920 mL
50 mM	0.0384 mL	0.192 mL	0.384 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Andreas Janzer, et al. Abstract DDT02-04: BAY 2402234: A novel, selective dihydroorotate dehydrogenase (DHODH) inhibitor for the treatment of myeloid malignancies. AACR Annual Meeting 2018; April 14-18, 2018; Chicago, IL.

Qiu X, Jiang S, Xiao Y, et al. SOX2-dependent expression of dihydroorotate dehydrogenase regulates oral squamous cell carcinoma cell proliferation. International Journal of Oral Science. 2021, 13(1): 1-9.

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